



TOWN OF LINCOLN

MIDDLESEX COUNTY MASSACHUSETTS

TOWN OF LINCOLN
WATER DEPARTMENT
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US EPA, Region I
PWTF GP Processing
Municipal Assistance Unit (CMU)
1 Congress Street, Suite 1100
Boston, MA 02114-2023

MassDEP, Division of Watershed Management
627 Main Street, 2nd Floor
Worcester, MA 01608

Subject: Lincoln Water Treatment Plant
Notice of Intent for General Permit

To Whom It May Concern:

The Lincoln Water Department respectfully submits the attached Notice of Intent (NOI) for changes associated with Lincoln's Flint Pond Water Treatment Plant under NPDES General Permit (MAG640000) for Surface Water Discharges. Lincoln currently holds NPDES Permit MAG640051 for the discharges from the treatment plant to Flint's Pond, a Class A water body. The following letter outlines the information required for the NOI submission. A copy of the completed EPA-suggested NOI Form is attached. A site location map is provided as Figure 1.

Description of Treatment Process and Discharge of Filter Backwash Water

The Flint's Pond Water Treatment Plant utilizes microfiltration as its primary treatment process. A process flow diagram is shown in Figure 2. The raw (source) water from Flint's Pond is pumped through membrane modules, which are termed the "first stage" or "primary" membranes. The filtered water, called filtrate, from the primary membranes then receives further treatment (disinfection and corrosion control) in a clearwell prior to being supplied to the public. The four primary membranes generate waste wash water from the routine membrane backwashing process. The backwash water is collected and filtered through a "second stage" membrane module. This filtrate is then treated in a similar manner as the primary stage filtrate. The backwash water generated from the second stage membrane is then directed into an equalization/sedimentation tanks from which supernatant will be returned via gravity to Flint's Pond. Both the primary and secondary stage membranes do not utilize pretreatment chemicals, and as such, this water does not contain chemical residue and maintains the same pH as the raw water of the pond. Settled solids, if any, from the equalization / sedimentation tanks will be pumped to the on-site sand drying beds and the supernatant returned via gravity to Flint's Pond.

In October, 2009, Lincoln initiated a project to replace the existing Siemens membranes with their newest membrane technology. The new membranes filter in a similar manner as the old membranes; however the membrane cleaning process has been modified. In addition to the routine raw water backwash process that occurs every 22 minutes, daily hypochlorite & citric acid maintenance washes and monthly hypochlorite & citric acid clean-in-place (CIP) procedures have been incorporated to maintain the membrane performance. Prior to the membrane change out, the CIP process involved a different chemical cleaning process that required off-site disposal of process fluids. Fluids generated by the new chemical cleaning processes will be neutralized in an existing above-ground storage tank (AST) prior to being discharged to the equalization / neutralization tank and the subsequent outfall. The chlorine from the new CIP and maintenance wash waste water will be neutralized in the AST by sodium bisulfite and the pH adjusted by sodium hydroxide. A hydrochloric acid CIP is also available for removal of mineral deposits on the membrane surface, however this process has not been used since plant start-up. Water used for the chemical solutions is raw water and does not contain any chemicals associated with the finished drinking water.

The membrane backwash and maintenance wash processes will generate a maximum of 50,000 gallons of water per day while the plant is operating. As with the existing cleaning system, the raw water maintenance washes are anticipated to average 30,000 gallons per day of operation. The new daily chemical maintenance washes will generate approximately 5,500 gallons of neutralized chemicals and rinse water per cleaning (assuming five cleanings per day).

Effluent Characteristics

Existing Discharge Monitoring Report (DMR) forms from the previous four quarters of sampling were used to complete the effluent reporting data in the EPA NOI form. The treatment plant has one effluent outfall, number 001. Effluent characteristics are provided in Table 1. Lincoln does not use any aluminum-based coagulants in its treatment process and does not remove arsenic from the water. As a result Total Recoverable Aluminum and Total Recoverable Arsenic data are not available. To date, no Whole Effluent Toxicity Testing (LC-50 and C-NOEC) has been conducted at the site.

The existing water treatment facility utilizes chlorine gas for disinfection, sodium hydroxide for pH adjustment, zinc orthophosphate for corrosion control, and sodium fluoride for fluoridation. These chemicals are injected either immediately before, or after the clearwell. New chemical treatment for the membrane maintenance and CIP washes will include sodium hypochlorite, sodium hydroxide, citric acid, sodium bisulfite and hydrochloric acid. The cleaning solutions will be pH adjusted to fall within the existing NPDES range of 6.0 to 9.0. Copies of the daily pH measurements for the last year are attached.

Parameter	Monthly Average	Maximum Daily
Discharge Flow (gpd)	33,000	60,000
TSS (mg/l)	9.6	21
pH (s.u)	6.4	6.8
Total Recoverable Aluminum (ug/l)	N/A	N/A
Total Residual Chlorine (ug/l)	N/A	N/A
Whole Effluent Toxicity (%)	N/A	N/A

Dilution Factors

The Lincoln Water Department contacted Kathleen Keohane of the Massachusetts Department of Environmental Protection to conduct a site visit to determine the dilution factor of the treatment plant discharge. Ms. Keohane conducted an inspection on November 4, 2009 and determined that since the treatment plant is in the headwaters of the reservoir and the discharge flows down a drainage channel back into the reservoir upstream of the treatment plant intake, a 10:1 dilution factor was applicable for this site.

Endangered Species Act

LWD reviewed existing Federal and State websites to assess if the discharge, or discharge-related activities, will impact Federally-listed endangered and threatened species and designated critical habitats. LWD reviewed the four species of concern, the shortnose sturgeon, the dwarf wedge mussel, the bog turtle and the northern red-bellied cooter and based on the habitats listed in Appendix II of the NPDES Potable Water Treatment Facility General Permit determined the species or their designated habitat are likely to occur in the vicinity of the discharge. LWD also reviewed the Endangered Species Act: County Species list, updated June 22, 2009, and determined no federally-listed endangered species were identified in Lincoln.

LWD reviewed C.F.R. Part 17 - Endangered and Threatened Wildlife and Plants, and 50 C.F.R. Part 226 - Designated Critical Habitat and did not identify any critical habitat in the project area. In addition, the Massachusetts Natural Heritage and Endangered Species program did not identify any core habitats in the vicinity of the outfall or discharge.

Based on the results of this evaluation of data, the discharge and discharge-related activities is “not likely to affect” any federally threatened or endangered listed species or designated critical habitat. This determination is classified as Criterion A under the Endangered Species Act eligibility criterion.

Historic Properties

The discharge water from the Treatment Plant outfall flows from LWD property and into the abutting property owned by the Town of Lincoln. Town owns the land as part of its watershed protection plan. No historic properties exist on the Town property between the existing outfall and the discharge point into Flint’s Pond. A review of National Register of Historic Places on the National Park Service website did not locate any historic sites that would be impacted by the discharge. A visual inspection of the drainage channel did not identify any historic properties. No external construction activities are required for this discard. Based on this information, the facility meets Criterion 1 of the Historic Properties requirement.

Best Management Practices

There are no sewers in Lincoln and as a result backwash fluids must either be hauled away for off-site disposal or discharged on-site. Currently untreated raw pond water is

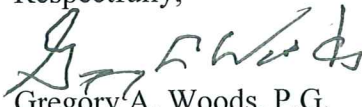
used to backwash to membrane filters, however a change in membrane material will result in the use of chemical solutions for filter maintenance. The chemicals include sodium hypochlorite, citric acid and hydrochloric acid. These chemicals will be neutralized in the plant prior to discharge. To ensure complete de-chlorination of the maintenance wash and CIP fluids, sodium bisulfite will be used at a dose twice the amount theoretically needed to neutralize the fluid. Also, sodium hydroxide will be used to adjust the pH of the fluid to a value between the existing NPDES permit limits of 6.0 to 9.0. An existing pH probe is currently located in the equalization tank and will be used to monitor the discharged fluids.

A 1,500 gallon equalization tank, located outside of the treatment plant, is used to baffle the intermittent flow from the backflush tank. This provides for a fairly uniform discharge rate into the drainage channel. The wash water then enters two 3,150 gallon concrete settlings tanks before discharging to the drainage swale.

Lincoln does not use aluminum-based chemicals for its treatment process, and as such, does not need an aluminum minimization program. Raw water is used to make the chemical cleaning solutions and therefore does not contain any phosphate-based corrosion control chemicals.

Based on the information provided above, the discharge meets the applicable requirements of the general permit and Lincoln requests coverage under the Potable Water Treatment Facility General Permit.

Respectfully,


Gregory A. Woods, P.G.
Superintendent

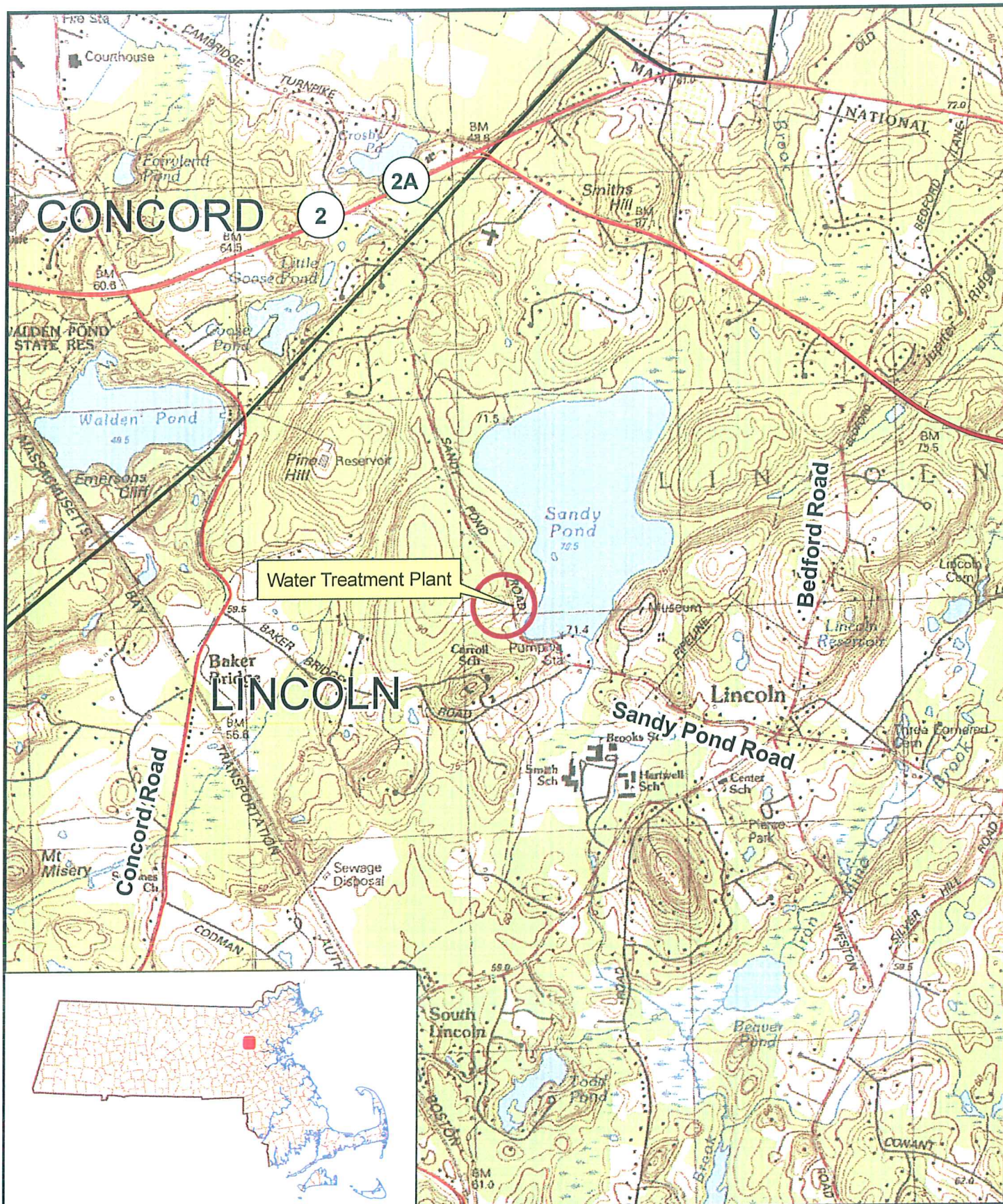


FIGURE 1
Lincoln, MA

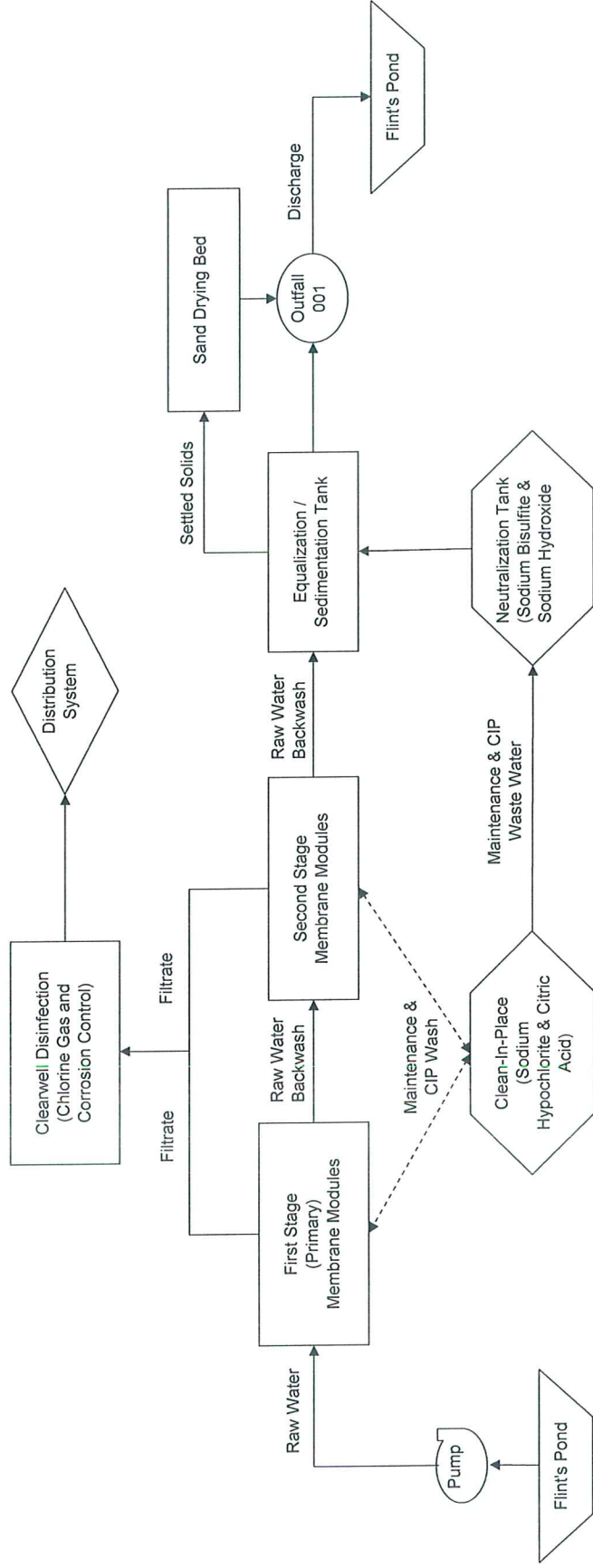
Lincoln Water Department Facilities Locus Map



Weston & Sampson

Figure 2

Lincoln Water Department
Flint's Pond Water Filtration Plant
Process Flow Diagram



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
ONE CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

Request for General Permit Authorization to Discharge Wastewater
(Notice of Intent to be covered by the General Permit (NOI))

Potable Water Treatment Facility (PWTF)
NPDES General Permit No. MAG640000 and NHG640000

Transmit # 1 # W068067

A. Facility Information

1. Facility Owner:

Name Lincoln Water Department e-mail _____
Street/PO Box 80 Sandy Pond Road City Lincoln
State MA Zip Code 01773
Contact Person Gregory Woods Telephone Number 781-259-8997

2. Facility Operator (if different from above):

Name _____ e-mail (optional) _____
Street/PO Box _____ City _____
State _____ Zip Code _____
Contact Person _____ Telephone Number _____

3. Facility Data (attach topographic map or other map showing facility/discharge location):

Name Flint's Pond Treatment Plant e-mail (optional) _____
Street/PO Box 80 Sandy Pond Road City Lincoln
State MA Zip Code 01773
Contact Person Gregory Woods Telephone Number 781-259-8997
Latitude 42.431433 Longitude -71.319236

4. Standard Industrial Classification (SIC Codes) and Descriptions of Processes:

SIC Code(s) 4941-03
Description(s) Water Supply - membrane treatment plant

5. Current Permitting Status (please check yes or no):

1. Has a prior NPDES permit been granted for the discharge? Yes ☒ (Permit Number: MAG640051)
No _____
2. Is the discharge a "new discharge" as defined by 40 CFR Section 122.22? Yes _____ No ☒
3. Is the facility covered by an individual NPDES permit? Yes _____ (Permit Number _____) No _____
4. Is there a pending application on file with EPA for this discharge? Yes _____ (Date of submittal: _____)
No ☒

B. Discharge Information

1. Name of Receiving Waterbody Flint's Pond (Formerly Sandy Pond)
2. Type of Receiving Waterbody (e.g. stream, lake, reservoir, estuary etc) Pond
3. State Water Quality Classification: Class A Freshwater: XXXX Marine Water: _____
4. Describe the discharge activities for which the owner/applicant is seeking coverage, including process discharges not specifically authorized in the PWTF GP which need to be authorized for discharge (and which attain the

effluent limits and other conditions of the general permit). This description should include all treatment methods used on the wastewater prior to discharge including lagoons, baffles, filter presses etc. If lagoons are used at the facility, please include the number and size of lagoons; the size and elevation of the entry pipe; the time of travel from the entry point of the discharge into the lagoon to the entry point to the receiving water; and the length of backwash cycle for any combination of number of filters. (attach extra sheets if necessary):

See attached NOI summary letter with process and discharge description.

5. Please provide a diagram depicting the treatment methods, outfalls, and receiving water.

6. Number of outfalls: 1

For each outfall:

7. What is the proposed sampling location(s) and proposed consistent times of the month for collecting samples:

Samples will be collected at the plant outfall located next to the drying beds during time of operation. Samples will typically be collected between

8 AM and 11 AM. The latitude and longitude of the drainage channel discharge into Flint's Pond is 42.432263, -71.316920

C. Effluent Characteristics

1. List here and attach information on any water additives used at the facility (Including chemicals for pH adjustment, dechlorination, control of biological growth, and control of corrosion and scale in water pipes):

See attached NOI summary letter for chemical applications. Sodium bisulfite, potassium hydroxide, citric acid, sodium hypochlorite and hydrochloric acid.

2. Please report here any known remediation activities or water-quality issues in the vicinity of the discharge.

None known

3. Are aluminum-containing coagulants used at this facility? Yes ☐ No ☒

4. Does the discharge contain residual chlorine? Yes ☒ No ☐

5. Does the facility provide treatment to remove arsenic from the raw water source? Yes ☐ No ☒

6. Are phosphorus-containing chemicals added to the treated water at this facility? Yes ☐ No ☒

7. All applicants must attach a separate sheet listing all laboratory results (minimum of five) for total recoverable aluminum (in micrograms per liter) taken within the last six months. Do not include dilution when recording your results. See Section 4.4.5 of General Permit for more information.

8. Please include the following effluent data for each outfall:

<u>Characteristic (report if measured)</u>	<u>Average Monthly</u>	<u>Maximum Daily</u>
Discharge Flow (gpd)	<u>33,000</u>	<u>50,000</u>
TSS (mg/l)	<u>9.6</u>	<u>21</u>
pH (s.u.)	(min) <u>6.2</u>	(max) <u>6.8</u>
Total Recoverable Aluminum (ug/l)	<u>N/A</u>	<u>N/A</u>
Total Residual Chlorine (ug/l)	<u>N/A</u>	<u>N/A</u>

(continued on next page)

8. Continued

Characteristic (report if measured)

Whole Effluent Toxicity (%) LC50 N/A and/or C-NOEC N/A

9. If the discharge contains aluminum and/or residual chlorine, please provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water, the dilution factor, and attach any calculations used to support stream flow and dilution calculations (See Appendix VII for dilution calculations and additional information):

7Q10 N/A cfs Dilution Factor 10:1 cfs

D. Endangered Species Act Eligibility

1. Using the instructions in Appendix I of the PWTF GP, under which criterion listed in Part II are you eligible for coverage under this general permit?
A ☒ B ☐ C ☐ D ☐ E ☐ F ☐
2. If you selected criteria D or F, has consultation with the federal services been completed? Yes ☐ No ☐
3. If consultation with U.S. Fish and Wildlife Service and/or NOAA Fisheries Service was completed, was a written concurrence finding that the discharge is "not likely to adversely affect" listed species or critical habitat received? Yes ☒ No ☐
4. Attach documentation of ESA eligibility as described below and required at Part 3.4.1 and Appendix I, Part III, Step 4, of the General Permit.

Criterion A - No federally-listed threatened or endangered species or federally-designated critical habitat are present: A copy of the most current county species list pages for the county(ies) where your site or facility and discharges are located. You must also include a statement on how you determined that no listed species or critical habitat are in proximity to your site or facility or discharge locations.

Criterion B - Section 7 consultation completed with the Service(s) on a prior project: A copy of the USFWS's and/or NMFS's, as appropriate, biological opinion or concurrence on a finding of "unlikely to adversely effect" regarding the ESA Section 7 consultation.

Criterion C - Activities are covered by a Section 10 Permit: A copy of the USFWS's and/or the NMFS's, as appropriate, letter transmitting the ESA Section 10 authorization.

Criterion D - Concurrence from the Service(s) that the discharge is "not likely to adversely affect" federally-listed species or federally-designated critical habitat (not including the four species of concern identified in Section I of Appendix I): A copy of the USFWS's and/or the NMFS's, as appropriate, letter or memorandum concluding that the discharge is consistent with the general permit's "not likely to adversely affect" determination.

Criterion E - Activities are covered by certification of eligibility: A copy of the documents originally used by the other operator of your site or facility (or area including your site) to satisfy the documentation requirement of Criteria A, B, C or D.

Criterion F - Concurrence from the Service(s) that the discharge is "not likely to adversely affect" species of concern, as identified in Section I of Appendix I: A copy of the USFWS and/or the NMFS, as appropriate, concurrence with the applicant's determination that the discharge is "not likely to adversely affect" listed species.

E. National Historic Properties Act Eligibility

1. Using the instructions in Appendix III of the PWTf GP, under which criterion listed in Part III are you eligible for coverage under this general permit?

1 ☒ 2 ☐ 3 ☐

2. Have any State or Tribal historic preservation officers been consulted in this determination? Yes ☐ No ☒
If yes, attach the results of the consultation(s).

F. Certification

I certify that the discharge for which I am seeking coverage under the general permit consists solely of a surface water discharge from a potable water treatment facility. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature



Date

12/28/09

Printed Name and Title Gregory A. Woods

Federal regulations require this application to be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For partnership or sole proprietorship, by a general partner or the proprietor, respectively, or,
3. For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

Note: Permits No. MAG640000 and NHG640000 may be found at www.epa.gov/region1/npdes/pwtfgp.html

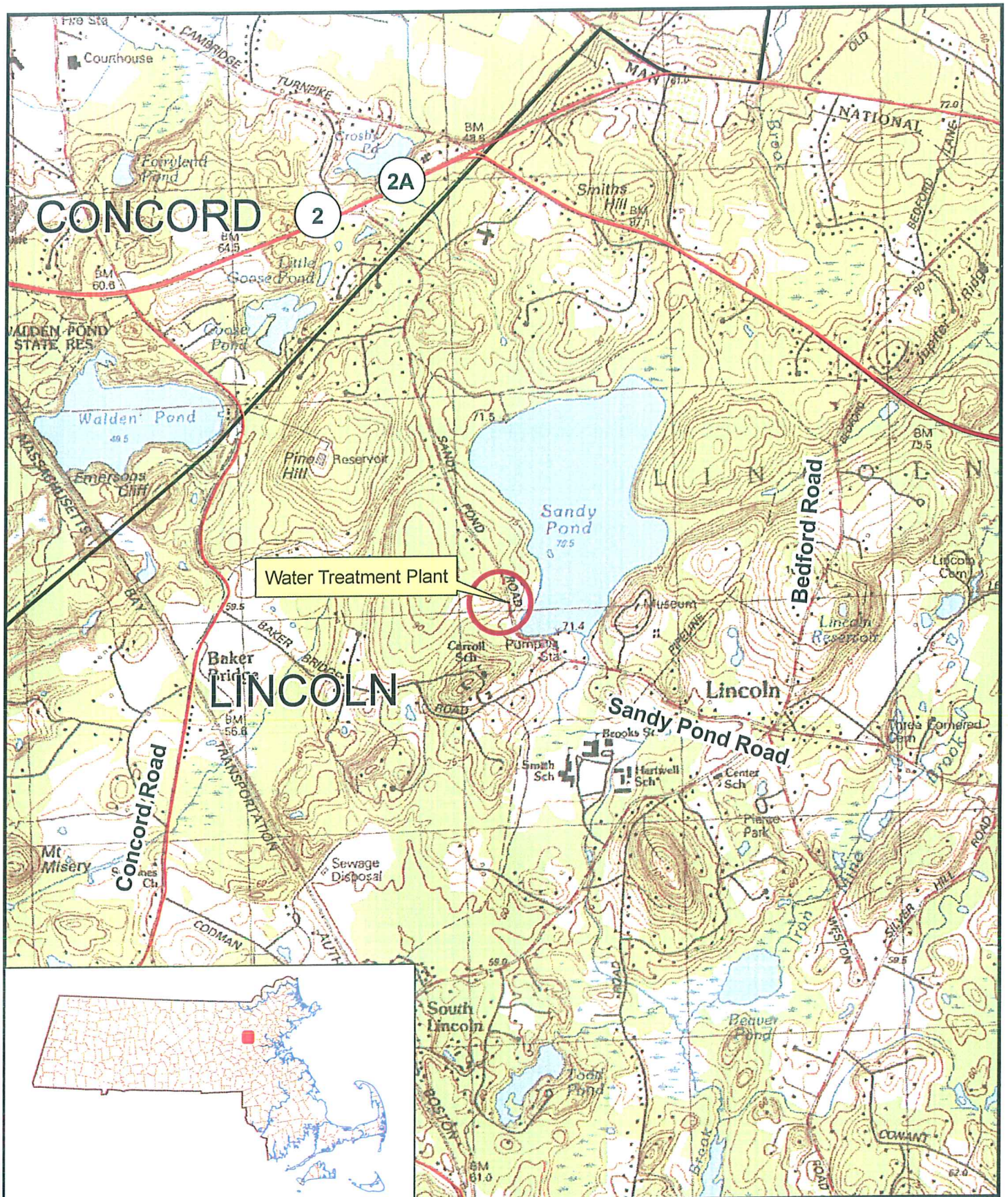
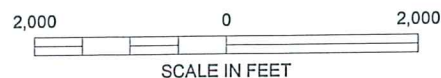


FIGURE 1
Lincoln, MA

Lincoln Water Department Facilities Locus Map



Weston & Sampson

YEAR

TSS GRAB/COMP. SAMPLE SHEET

2009	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	27-Jul	6.44	Mon	3-Aug	6.27	Mon	10-Aug	6.40
Tues	28-Jul	6.35	Tues	4-Aug	6.33	Tues	11-Aug	6.29
Wed	29-Jul	6.27	Wed	5-Aug	6.38	Wed	12-Aug	6.57
Thurs	30-Jul	6.40	Thurs	6-Aug	6.38	Thurs	13-Aug	6.35
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	17-Aug	6.43	Mon	24-Aug	6.35	Mon	31-Aug	6.43
Tues	18-Aug	6.36	Tues	25-Aug	6.26	Tues	1-Sep	6.45
Wed	19-Aug	6.13	Wed	26-Aug	6.22	Wed	2-Sep	6.40
Thurs	20-Aug	6.06	Thurs	27-Aug	6.24	Thurs	3-Sep	6.41
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	7-Sep	6.42	Mon	14-Sep	6.40	Mon	21-Sep	6.41
Tues	8-Sep	6.40	Tues	15-Sep	6.43	Tues	22-Sep	6.36
Wed	9-Sep	6.38	Wed	16-Sep	6.41	Wed	23-Sep	6.39
Thurs	10-Sep	6.35	Thurs	17-Sep	6.39	Thurs	24-Sep	6.42
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	28-Sep	6.40	Mon	5-Oct	6.34	Mon	12-Oct	6.40
Tues	29-Sep	6.27	Tues	6-Oct	6.30	Tues	13-Oct	6.41
Wed	30-SEP	6.26	Wed	7-Oct	6.27	Wed	14-Oct	6.43
Thurs	1-OCT	6.30	Thurs	8-Oct	6.29	Thurs	15-Oct	6.32
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	19-Oct	6.30	Mon	26-Oct	—	Mon	2-Nov	6.34
Tues	20-Oct	6.39	Tues	27-Oct	—	Tues	3-Nov	6.37
Wed	21-Oct	6.31	Wed	28-Oct	6.29	Wed	4-Nov	6.40
Thurs	22-Oct	6.36	Thurs	29-Oct	6.32	Thurs	5-Nov	6.42
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	9-Nov	6.49	Mon	16-Nov	6.48	Mon	23-Nov	6.44
Tues	10-Nov	6.54	Tues	17-Nov	6.50	Tues	24-Nov	6.47
Wed	12-Nov	—	Wed	18-Nov	6.52	Wed	25-Nov	6.46
Thurs	13-Nov	6.51	Thurs	19-Nov	6.38	Thurs	26-Nov	—
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	30-Nov	6.49	Mon	7-Dec	6.43	Mon	14-Dec	6.50
Tues	1-Dec	6.47	Tues	8-Dec	6.46	Tues	15-Dec	6.41
Wed	2-Dec	6.50	Wed	9-Dec	6.40	Wed	16-Dec	6.44
Thurs	3-Dec	6.51	Thurs	10-Dec	6.48	Thurs	17-Dec	6.40
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	21-Dec		Mon	28-Dec		Mon	4-Jan	
Tues	22-Dec		Tues	29-Dec		Tues	5-Jan	
Wed	23-Dec		Wed	30-Dec		Wed	6-Jan	
Thurs	24-Dec		Thurs	31-Dec		Thurs	7-Jan	
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	11-Jan		Mon	18-Jan		Mon	25-Jan	
Tues	12-Jan		Tues	19-Jan		Tues	26-Jan	
Wed	13-Jan		Wed	20-Jan		Wed	27-Jan	
Thurs	14-Jan		Thurs	21-Jan		Thurs	28-Jan	

2010

YEAR

TSS GRAB/COMP. SAMPLE SHEET

2009	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	19-Jan	—	Mon	26-Jan	6.42	Mon	2-Feb	6.26
Tues	20-Jan	6.34	Tues	27-Jan	6.29	Tues	3-Feb	6.53
Wed	21-Jan	6.42	Wed	28-Jan	6.28	Wed	4-Feb	6.38
Thurs	22-Jan	6.40	Thurs	29-Jan	6.28	Thurs	5-Feb	6.39
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	9-Feb	6.36	Mon	16-Feb		Mon	23-Feb	6.30
Tues	10-Feb	6.43	Tues	17-Feb	6.20	Tues	24-Feb	6.34
Wed	11-Feb	6.31	Wed	18-Feb	6.26	Wed	25-Feb	6.27
Thurs	12-Feb	6.36	Thurs	19-Feb	6.28	Thurs	26-Feb	6.43
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	2-Mar	6.46	Mon	9-Mar	6.24	Mon	16-Mar	6.27
Tues	3-Mar	6.44	Tues	10-Mar	6.30	Tues	17-Mar	6.33
Wed	4-Mar	6.25	Wed	11-Mar	6.32	Wed	18-Mar	6.45
Thurs	5-Mar	6.32	Thurs	12-Mar	6.36	Thurs	19-Mar	6.40
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	23-Mar	6.43	Mon	30-Mar	6.45	Mon	6-Apr	6.38
Tues	24-Mar	6.52	Tues	31-Mar	6.40	Tues	7-Apr	6.39
Wed	Mar-09 ²³	6.43	Wed	1-Apr	6.33	Wed	8-Apr	6.33
Thurs	Mar-09 ²⁶	6.47	Thurs	2-Apr	6.31	Thurs	9-Apr	6.52
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	13-Apr	6.38	Mon	20-Apr	6.38	Mon	27-Apr	6.44
Tues	14-Apr	6.41	Tues	21-Apr	6.43	Tues	28-Apr	6.43
Wed	15-Apr	6.38	Wed	22-Apr	6.39	Wed	29-Apr	6.43
Thurs	16-Apr	6.44	Thurs	23-Apr	6.44	Thurs	30-Apr	6.37
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	4-May	6.42	Mon	11-May	6.42	Mon	18-May	6.34
Tues	5-May	6.26	Tues	12-May	6.36	Tues	19-May	6.37
Wed	6-May	6.40	Wed	13-May	6.38	Wed	20-May	6.33
Thurs	7-May	6.43	Thurs	14-May	6.42	Thurs	21-May	6.36
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	25-May	6.39	Mon	1-Jun	6.43	Mon	8-Jun	6.36
Tues	26-May	6.20	Tues	2-Jun	6.84	Tues	9-Jun	6.45
Wed	27-May	6.42	Wed	3-Jun	6.38	Wed	10-Jun	6.25
Thurs	28-May	6.40	Thurs	4-Jun	6.39	Thurs	11-Jun	6.42
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	15-Jun	6.43	Mon	22-Jun	6.60	Mon	29-Jun	6.23
Tues	16-Jun	6.41	Tues	23-Jun	6.45	Tues	30-Jun	6.38
Wed	17-Jun	6.37	Wed	24-Jun	6.42	Wed	1-Jul	6.38
Thurs	18-Jun	6.40	Thurs	25-Jun	6.36	Thurs	2-Jul	6.35
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
Mon	6-Jul	6.22	Mon	13-Jul	6.36	Mon	20-Jul	6.43
Tues	7-Jul	6.30	Tues	14-Jul	6.30	Tues	21-Jul	6.44
Wed	8-Jul	6.35	Wed	15-Jul	6.38	Wed	22-Jul	6.39
Thurs	9-Jul	6.44	Thurs	16-Jul	6.33	Thurs	23-Jul	6.45

YEAR

TSS GRAB/COMP. SAMPLE SHEET

2008	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
MON	01/07/08	6.28	MON	01/14/08	6.56	MON	01/21/08	6.53
TUES	01/08/08	6.54	TUES	01/15/08	6.49	TUES	01/22/08	6.58
WED	01/09/08	6.56	WED	01/16/08	6.51	WED	01/23/08	6.51
THURS	01/10/08	6.62	THURS	01/17/08	6.27	THURS	01/24/08	6.48
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
MON	01/28/08	6.57	MON	02/04/08	6.50	MON	02/11/08	6.31
TUES	01/29/08	6.80	TUES	02/05/08	6.59	TUES	02/12/08	6.55
WED	01/30/08	6.62	WED	02/06/08	6.66	WED	02/13/08	6.42
THURS	01/31/08	6.59	THURS	02/07/08	6.64	THURS	02/14/08	6.55
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
MON	2/18/08	—	MON	2/25/08	6.06	MON	3/3/08	6.54
TUES	2/19/08	6.27	TUES	2/26/08	6.38	TUES	3/4/08	6.46
WED	2/20/08	6.53	WED	2/27/08	6.41	WED	3/5/08	6.22
THURS	2/21/08	6.58	THURS	2/28/08	6.47	THURS	3/6/08	6.11
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
MON	3/10/08	6.42	MON	3/17/08	5.85	MON	3/24/08	6.38
TUES	3/11/08	6.59	TUES	3/18/08	6.57	TUES	3/25/08	6.54
WED	3/12/08	6.49	WED	3/19/08	6.29	WED	3/26/08	6.69
THURS	3/13/08	6.30	THURS	3/20/08	6.29	THURS	3/27/08	6.64
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
MON	3/31/08	6.63	MON	4/7/08	6.57	MON	4/14/08	6.63
TUES	4/1/08	6.60	TUES	4/8/08	6.64	TUES	4/15/08	6.84
WED	4/2/08	6.68	WED	4/9/08	6.73	WED	4/16/08	6.68
THURS	4/3/08	—	THURS	4/10/08	6.63	THURS	4/17/08	6.38
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
MON	4/21/08	—	MON	4/28/08	6.15	MON	5/5/08	6.62
TUES	4/22/08	6.64	TUES	4/29/08	6.41	TUES	5/6/08	6.57
WED	4/23/08	6.64	WED	4/30/08	6.37	WED	5/7/08	6.53
THURS	4/24/08	6.59	THURS	5/1/08	6.48	THURS	5/8/08	6.55
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
MON	5/12/08	6.46	MON	5/19/08	6.54	MON	5/26/08	HOLIDAY
TUES	5/13/08	6.60	TUES	5/20/08	6.30	TUES	5/27/08	6.53
WED	5/14/08	6.53	WED	5/21/08	6.55	WED	5/28/08	6.50
THURS	5/15/08	6.22	THURS	5/22/08	6.49	THURS	5/29/08	6.56
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
MON	6/2/08	6.49	MON	6/9/08	6.50	MON	6/16/08	6.51
TUES	6/3/08	6.37	TUES	6/10/08	6.48	TUES	6/17/08	6.47
WED	6/4/08	6.43	WED	6/11/08	6.43	WED	6/18/08	6.31
THURS	6/5/08	6.47	THURS	6/12/08	6.39	THURS	6/19/08	6.39
Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading	Week Dates	Sample Date	pH Reading
MON	6/23/08	6.33	MON	6/30/08	6.44	MON	7/7/08	6.48
TUES	6/24/08	6.51	TUES	7/1/08	6.07	TUES	7/8/08	6.37
WED	6/25/08	6.46	WED	7/2/08	6.21	WED	7/9/08	6.87
THURS	6/26/08	6.38	THURS	7/3/08	6.25	THURS	7/10/08	6.33



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087
<http://www.fws.gov/northeast/newenglandfieldoffice>

January 2, 2009

To Whom It May Concern:

This project was reviewed for the presence of federally-listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

<http://www.fws.gov/northeast/newenglandfieldoffice/EndangeredSpec-Consultation.htm>

Based on the information currently available, no federally-listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service (Service) are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under Section 7 of the Endangered Species Act is not required.

This concludes the review of listed species and critical habitat in the project location(s) and environs referenced above. No further Endangered Species Act coordination of this type is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Mr. Anthony Tur at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office